DECISION DOCUMENT

Swan Garage Kent Supply Site
Brownfield Cleanup Program
New Rochelle, Westchester County
Site No. C360210
June 2022

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

Swan Garage Kent Supply Site
Brownfield Cleanup Program
New Rochelle, Westchester County
Site No. C360210
June 2022

Statement of Purpose and Basis

This document presents the remedy for the Swan Garage Kent Supply Site a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Swan Garage Kent Supply Site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

During the course of the investigation, certain actions known as interim remedial measures (IRMs), were initiated at the above referenced site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or alternatives analysis (AA). The IRM being undertaken at this site is discussed in Section 6.2.

Based on the implementation of the IRMs, the findings of the investigation of this site indicate that the site does not pose a threat to human health or the environment; therefore, No Further Action is the selected remedy. The remedy may include continued operation of a remedial system if one was installed during the IRM and the implementation of any prescribed institutional controls/engineering controls (ICs/ECs) that have been identified as being part of the proposed remedy for the site.

The elements of the selected remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The remedial design program will include:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Monitored Natural Attenuation

Groundwater contamination (remaining after active remediation) will be addressed with monitored natural attenuation (MNA). Groundwater will be monitored for site related contamination and also for MNA indicators which will provide an understanding of the (biological activity) breaking down the contamination. It is anticipated that contamination will be below groundwater standards within 5 years. Reports of the attenuation will be provided annually, and active remediation will be proposed if it appears that natural processes alone will not address the contamination. The contingency remedial action will depend on the information collected, but it is currently anticipated that enhanced bioremediation would be the expected contingency remedial action.

3. Conditional Track 1

The intent of the remedy is to achieve a Track 1 unrestricted use. A Site Management Plan (SMP) will be developed, and an Environmental Easement will be recorded to address residual groundwater impacts and a soil vapor intrusion (SVI) evaluation of the site, and to implement actions if needed. The SMP requires groundwater monitoring until contaminant concentrations are below groundwater standards, or there is a bulk reduction to asymptotic levels acceptable to the Department. A Track 1 cleanup can only be achieved if any SVI mitigation systems on future buildings and groundwater treatment/monitoring are no longer needed within 5 years of the date of the Certificate of Completion. Upon a demonstration that these components of the remedy are no longer necessary, the SMP and Environmental Easement will be extinguished. If the bulk reduction in groundwater concentrations to asymptotic levels acceptable to the Department are reached but the concentrations remain above groundwater standards, and depending on the need for SVI mitigation, the site may still be eligible for a Track 1 cleanup, however, a groundwater use restriction and associated easement would still be required. If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Chapter 873, Article VII of the Laws of Westchester County, which prohibits potable use of groundwater without prior approval.

In the event that Track 1 unrestricted use is not achieved, including achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will remain, and the remedy will achieve a Track 2 residential cleanup.

3a. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 2 residential cleanup at a minimum.

3b. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for residential, restricted-residential use or commercial use or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- require compliance with the Department approved Site Management Plan.

3c. Site Management Plan

A Site Management Plan is required, which includes the following:

1. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 3b above.

Engineering Controls: Any engineering controls that may be required following the five-year conditional Track 1 evaluation period (e.g., sub-slab depressurization system).

This Site Management Plan (SMP) includes, but may not be limited to:
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion of any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls, if any;

- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

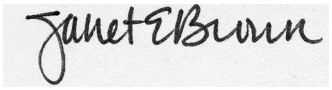
a. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- Monitoring groundwater to assess the performance and effectiveness of the groundwater treatment implemented, and to inform the need for additional groundwater treatment;
- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

b. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of vapor mitigation system(s), if any. The plan includes, but is not limited to:
- procedures for operating and maintaining the system(s)/contingent groundwater remedy, if any; and
- compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.



June 24, 2022
Date

Janet Brown, Director
Remedial Bureau C

DECISION DOCUMENT

Swan Garage Kent Supply Site
New Rochelle, Westchester County
Site No. C360210
June 2022

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance, based on the reasonably anticipated use of the property.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repository:

DEC Info Locator - Web Application
https://www.dec.ny.gov/data/DecDocs/C360210/

New Rochelle Public Library
Attn: Tom Geoffino
1 Library Plaza
New Rochelle, NY 10801
Phone: (914) 632-7878

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The site includes 64 Centre Avenue (Tax ID No. 2-415-0008), a lot on Centre Avenue with no physical address, (Tax ID No. 2-415-0006), and a portion of 8 Westchester Place (Tax ID No. 2-415-0048) and is located in New Rochelle, Westchester County. The surrounding properties include retail businesses, retail/commercial store fronts, a multi-story apartment structure, commercial businesses, and mixed-use properties. The site is located between Centre Avenue and Division Street. The site is walking distance from the New Rochelle Metro-North train station.

Site Features: The site is currently being developed into a multi-story residential building, and construction began in July 2021, after all soil above bedrock was removed from the site as part of an Interim Remedial Measure (IRM) completed under the BCP.

Current Zoning and Land Use: The parcel without a physical address (Lot 6) and the 64 Centre Avenue parcel (Lot 8) are currently in the Downtown Overlay (DO-2) District. The 8 Westchester Place parcel (Lot 48) is currently located in the Downtown Business (DB) District. The prior uses were commercial/retail space uses. The closest residential area is a condominium building that is located about 50 feet away from the site to the west.

Past Use of the Site: Lot 8 was undeveloped between 1887 and 1903. A one-story building was constructed on Lot 8 in 1911 and was identified on the 1951-2003 Sanborn maps to be used for Battery Service and Auto Repairs. Morris J. Hacker & Sons, Inc., operated a business on the property from 1972-2014. This building on this lot was razed in 2019.

Lot 48 was developed with an 80-vehicle capacity parking garage in 1928. Maps from 1931 and 1951 note that the property was improved with a garage. The building operated as "The Wm. W. Swan Co. Garage" in 1911 and "Garage & Battery Service" in 1931. In 1960, the building was renovated and used for commercial purposes by Kent Supply Company, which sold plumbing and heating units. The structure on Lot 48 was razed in 2019.

Lot 6 was improved with a two-story dwelling between 1887 and 1911. From 1933-2014, Lot 6 was improved with a building for car washing, greasing, and auto repair. The structure on Lot 6 was razed in 2019.

Multiple underground storage tanks (USTs) and above ground storage tanks (ASTs) associated with petroleum products were historically present across the site. The most recent ground

penetrating radar (GPR) work on the site indicated two more potential USTs at the entrance of Lot 48. Spill number 1308480 was associated with the removal of a UST on Lot 8, and the spill was closed in 2015. Spill number 2003773 was created in the summer of 2020 after a Phase II investigation experienced excessive petroleum odors. This spill will be properly managed under the BCP site.

Geology and Hydrogeology: Surficial soils at the site are composed of dark brown and gray coarse to fine grained sand, gravel and clay to depths of 6 to 15 feet below ground surface (ft-bgs), where refusal was encountered on weathered bedrock. A prior geotechnical investigation drilled through the weathered rock to refusal on schist bedrock at 12.5 to 18 ft-bgs. Fill material is generally present at the site from beneath the asphalt layer to 8 ft-bgs. According to the 1970 Geologic Map of New York, the bedrock underlying the site is of the Harland Formation. It is comprised primarily of basal amphibolite gneiss overlain by politic schists.

In the course of all investigation activities, groundwater was encountered at depths ranging from approximately four to eight ft-bgs. However, overburden groundwater appears to be perched, and true groundwater within the overburden is located within one foot of the underlying bedrock. Seasonal groundwater is not present on the site. Groundwater flow has been determined to flow in the western/southwestern direction.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, an alternative which allows for unrestricted use of the site was evaluated.

A comparison of the results of the Remedial Investigation (RI) against unrestricted use standards, criteria and guidance values (SCGs) for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicants under the Brownfield Cleanup Agreement are Volunteers. The Applicants do not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and

- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminants of concern identified at this site are:

tetrachloroethene (PCE)
trichloroethene (TCE)
endrin
dieldrin
benzene
toluene
ethylbenzene
n-propylbenzene
1,3,5-trimethylbenzene
1,2,4-trimethylbenzene
naphthalene
benzo(a)anthracene

benzo(a)pyrene
benzo(b)fluoranthene
benzo(k)fluoranthene
chrysene
indeno(1,2,3-cd)pyrene
o-xylene
sec-butylbenzene
isopropylbenzene
pentachlorophenol
phenol
chromium
lead
copper
mercury
nickel
iron
manganese
magnesium
selenium
thallium
zinc
cadmium
silver
DDT
PCB aroclor 1260

The contaminants of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor intrusion

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRM has been completed at this site based on conditions observed during the RI.

Site-Wide Soil and UST Removal and ORC Application

All on-site soils were excavated down to bedrock and disposed off-site, which included all soils exceeding unrestricted SCOs for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, metals, and PCBs. A total of 12,884 cubic yards of contaminated soil was removed from the site. Four 30-gallon and two 550-gallon underground storage tanks (USTs) on the western edge of the site on Lot 48 associated with a historic gas station were identified, removed, and disposed off-site during the soil excavation IRM.

Oxygen Release Compound (ORC) was applied to the bedrock surface to treat VOCs in groundwater following the excavation of soils from the site and prior to pouring of the foundation slab. The area of treatment on Lot 48 is approximately 16,200 square feet and the treatment of the bedrock groundwater is targeted to a depth of 20 feet below ground surface as shown on Figure 2.

Approximately 1,200 cubic yards of stone aggregate fill meeting the requirements of 6 NYCRR Part 375-6.7(d) was brought in to complete the backfilling of the excavation and establish design grades.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Remediation at the site is partially complete. Remedial actions thus far have successfully achieved soil cleanup objectives for unrestricted use because soil was removed to the top of bedrock under an IRM. After the IRM, groundwater samples were collected from five new bedrock wells constructed for MNA monitoring. The bedrock monitoring well samples were analyzed for VOCs only. Benzene was detected at 1 ppb vs a standard of 1 ppb. Benzene was also detected in another bedrock well at 1.2 ppb. Tetrachloroethene (PCE) was detected in one bedrock well at 7.4 ppb vs a standard of 5 ppb. chlorinated VOCs (CVOCs) were not detected in on-site soils. Although CVOC vapors were found on the Swan Garage Kent Supply site there is no identified on-site CVOC source. The adjacent Green Heaven Dry Cleaners site (360226) is in the site characterization phase in order to investigate the potential for the Green Haven site to be the source of CVOCs to the Swan Garage Kent Supply site.

For PFAS, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were reported in groundwater at concentrations up to 57.6 and 41 parts per trillion (ppt), respectively, each exceeding the 10 ppt maximum contaminant level (MCL) for public drinking water supplies. Based on the soil data, the site itself is not considered a source for PFAS contamination in groundwater, and the levels observed are consistent with average concentrations detected in groundwater throughout New Rochelle.

There is a potential for on-site groundwater to migrate off-site through the fractured network. However, ingestion exposures are not expected since there are no private or municipal drinking water wells within 0.5 miles of the site, and Chapter 873, article VII of the Laws of Westchester County, prohibits potable use of groundwater without prior approval.

Prior to remediation, the primary contaminants of concern include VOCs, SVOCs, PCBs, pesticides, metals in soil, SVOCs, VOCs, metals, and PFAS in groundwater, and VOCs in soil vapor.

Prior to Completion of Soil Removal IRM:

Soil and groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, metals, cyanide, and the emerging contaminants per-and poly fluoroalkyl substances (PFAS) and 1,4-dioxane. Soil vapor samples were analyzed for VOCs. Based on investigations conducted to date, the primary contaminants of concern include VOCs, SVOCs, PCBs, pesticides, metals, and the emerging contaminants PFAS in soil, SVOCs, VOCs, metals, and PFAS in groundwater, and VOCs in soil vapor.

Soil - A total of 34 soil samples were collected during the remedial investigation from 20 borings extending to bedrock across the site. Several constituents were identified at concentrations that exceed their unrestricted soil cleanup objectives (USCOs). The following is a list of those compounds and the maximum exceedance: benzene 3.1 parts per million (ppm) vs USCO of 0.06 ppm, toluene 18 ppm vs UCSO of 0.7 ppm, ethylbenzene 71 ppm vs USCO 1 ppm, xylenes 350 ppm vs USCO 0.26 ppm, n-propylbenzene 34 ppm vs USCO of 3.9 ppm, 1,3,5-trimethylbenzene 55 ppm vs USCO of 8.4 ppm, 1,2,4-trimethylbenzene 210 ppm vs USCO of 3.6 ppm, napthalene 24 ppm vs USCO of 12 ppm, benzo(a)anthracene 1.82 ppm vs USCO of 1 ppm, benzo(a)pyrene 1.39 ppm vs USCO of 1 ppm, benzo(b)fluoranthene 1.65 ppm vs USCO of 1 ppm, chrysene 1.67 ppm vs USCO of 1 ppm, indeno(1,2,3-cd)pyrene 0.985 ppm vs USCO of 0.5 ppm, copper 111 ppm vs USCO of 50 ppm, lead 721 ppm vs USCO of 63 ppm, mercury 4.2 ppm vs USCO of 0.18 ppm, nickel 43.6 ppm vs USCO of 30 ppm, zinc 419 ppm vs USCO of 109 ppm, cadmium 2.67 ppm vs USCO of 2.5 ppm, chromium 52.4 vs USCO of 30 ppm, silver 4.7 ppm vs USCO of 2 ppm, 4,4'-DDT 0.0085 ppm vs USCO of 0.0033 ppm, dieldrin 0.0404 ppm vs USCO of 0.005 ppm, and PCBs 0.181 ppm vs USCO of 0.1 ppm.

Emerging contaminants were detected in soil samples collected from the site. Perfluorooctanesulfonic acid (PFOS) was detected in 1 out of 34 samples collected throughout the site at 2 parts per billion (ppb) vs USCO of 0.88 ppb.

All on-site soils were excavated down to the bedrock surface and transported off-site for disposal as part of a soil removal IRM. Therefore, following the IRM, there are no soils remaining that exceed the USCOs. There is no indication that soil contamination extends off-site.

Groundwater - A total of 12 groundwater wells were installed throughout the site in both the overburden and bedrock. Throughout the soil excavation, the original wells were decommissioned and removed. After the IRM, five additional bedrock wells were installed, and geophysical testing conducted to better understand the bedrock fractures.

Prior to the IRM, groundwater samples were collected from monitoring wells and analyzed for VOCs, SVOCs, PCBs, pesticides, metals and cyanide as well as the emerging contaminants PFAS and 1,4-dioxane. No PCBs or cyanide were detected in any groundwater samples. The following compounds were detected in at least one groundwater sample in exceedance of groundwater standards (AWQS): VOCs 1,2-dichloroethane 0.88 ppb vs AWQS of 0.6 ppb, benzene 919 ppb vs AWQS of 1 ppb, toluene 47.1 ppb vs AWQS of 5 ppb, ethylbenzene 1140 ppb vs AWQS of 5 ppb, p/m-xylene 510 ppb vs AWQS of 5 ppb, o-xylene 20 ppb vs AWQS of 5 ppb, n-butylbenzene 16 ppb vs AWQS of 5 ppb, sec-butylbenzene 16 ppb vs AWQS of 5 ppb, isopropylbenzene 112 ppb vs AWQS of 5 ppb, p-isopropyltoluene 13 ppb vs AWQS of 5 ppb, naphthalene 380 ppb vs AWQS of 10 ppb, n-propylbenzene 210 ppb vs AWQS of 5 ppb, 1,3,5-trimethylbenzene 10 ppb vs AWQS of 5 ppb, 1,2,4-trimethylbenzene 220 ppb vs AWQS of 5 ppb, 1,2,4,5-tetramethylbenzne 57 ppb vs AWQS of 5 ppb; the SVOCs benzo(a)anthracene 0.13 ppb vs AWQS of 0.002 ppb, benzo(a)pyrene 0.13 ppb vs AWQS of 0 ppb, benzo(k)fluoranthene 0.16 ppb vs AWQS of 0.002 ppb, benzo(b)fluoranthene 0.15 ppb vs AWQS of 0.002 ppb, chrysene 0.14 ppb vs AWQS of 0.002 ppb, indeno(1,2,3-cd)pyrene 0.15 ppb vs AWQS of 0.002 ppb, pentachlorophenol 3.3 ppb vs AWQS of 1 ppb, 2,4-dimethylphenol 3.9 ppb vs AWQS of 1 ppb, and phenol 7.6 ppb vs AWQS of 1 ppb; the metals chromium 110 ppb vs AWQS of 50 ppb, iron 88500 ppb vs AWQS of 300

ppb, lead 165 ppb vs AWQS of 25 ppb, manganese 3096 ppb vs AWQS of 300 ppb, magnesium 41000 ppb vs AWQS of 35000 ppb, selenium 17.4 ppb vs AWQS of 10 ppb, thallium 0.62 ppb vs AWQS of 0.5 ppb, and nickel 141 ppb vs AWQS of 100 ppb; and the pesticides dieldrin and endrin. Elevated levels of SVOCs and metals in groundwater are likely due to suspended solids in the samples.

The groundwater encountered and sampled from the original overburden wells appears to be perched and a lack of overburden groundwater has also been noted at other sites in close proximity to the Swan Garage Kent Supply site and exhibit similar geology.

Soil Vapor - A total of 12 soil vapor samples were collected from locations throughout the site prior to the implementation of the IRM. Elevated levels of chlorinated volatile organic compounds were detected in soil vapor samples collected from the western half of the site, adjacent to the Green Heaven Dry Cleaners site. The maximum concentrations of PCE and trichloroethene (TCE) were 780 micrograms per cubic meter (ug/m3) and 39.8 ug/m3 respectively. Soil vapor impacts identified on and possibly migrating from the Swan Garage Kent Supply BCP Site are suspected as originating from volatile organic compound (VOC) contamination associated with the adjacent Green Heaven Dry Cleaners which is being investigated as a state superfund site (360226).

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

Contact with site soil is not an exposure concern since contaminated soil was removed from the site and replaced with clean fill. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Because the site is vacant, the inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development. Soil vapor intrusion is a potential concern for off-site buildings that will be further evaluated as a result of the adjacent Green Heaven Dry-cleaners site (360226) investigations.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives (RAOs) for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Conditional Track 1 remedy.

The selected remedy is referred to as the Groundwater Monitored Natural Attenuation remedy.

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The remedial design program will include:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance

ecological, economic and social goals;

- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Monitored Natural Attenuation

Groundwater contamination (remaining after active remediation) will be addressed with monitored natural attenuation (MNA). Groundwater will be monitored for site related contamination and also for MNA indicators which will provide an understanding of the (biological activity) breaking down the contamination. It is anticipated that contamination will be below groundwater standards within 5 years. Reports of the attenuation will be provided annually, and active remediation will be proposed if it appears that natural processes alone will not address the contamination. The contingency remedial action will depend on the information collected, but it is currently anticipated that enhanced bioremediation would be the expected contingency remedial action.

3. Conditional Track 1

The intent of the remedy is to achieve a Track 1 unrestricted use. A Site Management Plan (SMP) will be developed, and an Environmental Easement will be recorded to address residual groundwater impacts and a soil vapor intrusion (SVI) evaluation of the site, and to implement actions if needed. The SMP requires groundwater monitoring until contaminant concentrations are below groundwater standards, or there is a bulk reduction to asymptotic levels acceptable to the Department. A Track 1 cleanup can only be achieved if any SVI mitigation systems on future buildings and groundwater treatment/monitoring are no longer needed within 5 years of the date of the Certificate of Completion. Upon a demonstration that these components of the remedy are no longer necessary, the SMP and Environmental Easement will be extinguished. If the bulk reduction in groundwater concentrations to asymptotic levels acceptable to the Department are reached but the concentrations remain above groundwater standards, and depending on the need for SVI mitigation, the site may still be eligible for a Track 1 cleanup, however, a groundwater use restriction and associated easement would still be required. If no EE or SMP is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Chapter 873, Article VII of the Laws of Westchester County, which prohibits potable use of groundwater without prior approval.

In the event that Track 1 unrestricted use is not achieved, including achievement of groundwater and soil vapor remedial objectives, the following contingent remedial elements will remain, and the remedy will achieve a Track 2 residential cleanup.

3a. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 2

residential cleanup at a minimum.

3b. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for residential, restricted-residential use or commercial use or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- require compliance with the Department approved Site Management Plan.

3c. Site Management Plan

A Site Management Plan is required, which includes the following:

1. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 3b above.

Engineering Controls: Any engineering controls that may be required following the five-year conditional Track 1 evaluation period (e.g., sub-slab depressurization system).

This Site Management Plan (SMP) includes, but may not be limited to:
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion of any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls, if any;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

a. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- Monitoring groundwater to assess the performance and effectiveness of the groundwater treatment implemented, and to inform the need for additional groundwater treatment;

- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

b. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of vapor mitigation system(s), if any. The plan includes, but is not limited to:

- procedures for operating and maintaining the system(s)/contingent groundwater remedy, if any; and
- compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

REFERENCE:
HISTORICAL TOPOGRAPHICAL MAP PREPARED BY USGS, DATED 2019
MOUNT VERNON QUADRANGLE

Scale 1"=2000'

0 2000 4000

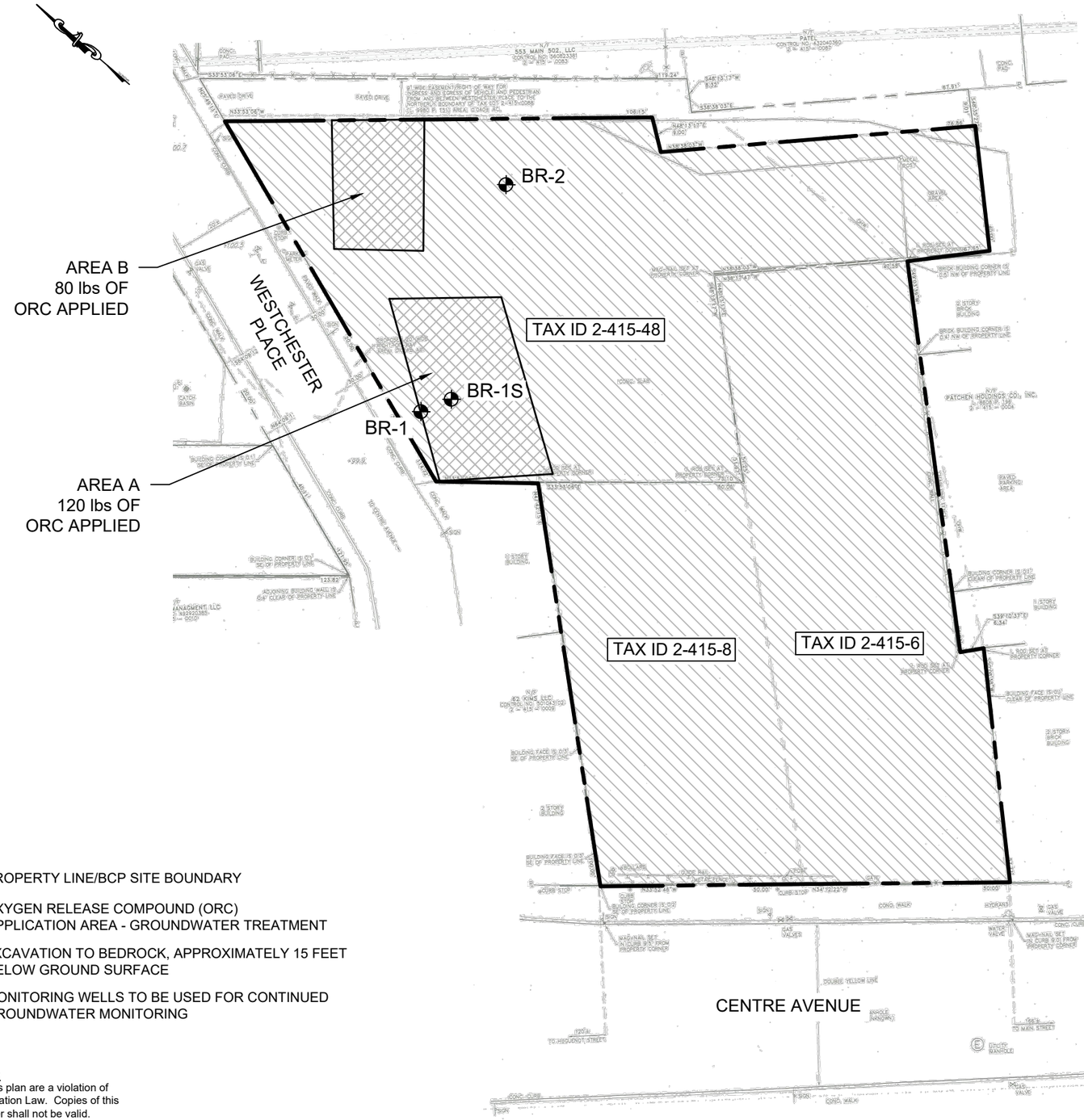
8 WESTCHESTER PLACE AND
64 CENTRE AVENUE
CITY OF NEW ROCHELLE
WESTCHESTER COUNTY, NEW YORK

SITE LOCATION
TOPOGRAPHICAL MAP

SESI
CONSULTING ENGINEERS
SOILS / FOUNDATIONS
SITE DESIGN
ENVIRONMENTAL
12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

FIG-1.1
DRAWN BY: aas
CHECKED BY: AA
SCALE: AS NOTED
DATE: 02/09/2021
JOB NO.: 11513

N:\ACAD\11513A\CAD\RIR\11513 – FIG-1.1 – SITE LOCATION TOPOGRAPHIC MAP.DWG 11/08/21 08:05:33AM, rdm, LAYOUT:FIG-1.1



LEGEND:

- PROPERTY LINE/BCP SITE BOUNDARY
- OXYGEN RELEASE COMPOUND (ORC) APPLICATION AREA - GROUNDWATER TREATMENT
- EXCAVATION TO BEDROCK, APPROXIMATELY 15 FEET BELOW GROUND SURFACE
- BR-1 MONITORING WELLS TO BE USED FOR CONTINUED GROUNDWATER MONITORING

REFERENCE
SITE INFORMATION AND EXISTING CONDITIONS TAKEN FORM "SURVEY PREPARED FOR ALLSTATE VENTURES" PREPARED BY LANC & TULLY ENGINEERING AND SURVEYING, LAST REVISED FEBRUARY 28, 2020.

Scale 1"=30'
0 30 60

SESI CONSULTING ENGINEERS
SOILS / FOUNDATIONS
SITE DESIGN
ENVIRONMENTAL
12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

dwg by: AMW
chk by: AA
scale: AS NOTED
date: 04/02/2022

project:
8 WESTCHESTER PLACE & 64 CENTRE AVENUE
CITY OF NEW ROCHELLE
WESTCHESTER COUNTY, NEW YORK

title:
IRM SOIL EXCAVATION AND GROUNDWATER TREATMENT

job no: 11513A
drawing no:

FIG-1

N:\ACAD\11513A\CAD\RIR\FIG-1 IRM SOIL EXCAVATION AND GROUNDWATER TREATMENT.DWG 04/25/22 09:42:25AM, alan.ward, LAYOUT:FIG-1